

### **REMARKS**

Applicants hereby traverse the current rejections, and request reconsideration and withdrawal in light of the amendments and remarks contained herein. Claims 8 and 15 have been canceled without prejudice. Claims 1-7, 9-14, and 16-20 are pending in this application.

#### **Rejection Under 35 U.S.C. § 101**

Claims 12-17 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

In response, Applicants have amended independent claim 12 to more clearly recite elements consistent with 35 U.S.C. § 101. The claims have been amended only for the purpose of complying with the requirements of statutory subject matter under 35 U.S.C. § 101 and not for the purpose of narrowing their scope in the face of prior art. The dependent claims have also been amended to reflect these changes, where necessary. No new matter has been added by these amendments.

Claim 12, as now amended, clearly defines providing first, second, and third inputs, of which the first input is an optical signal and the second input is an optical local oscillator signal. Both of these inputs comprise physical elements. The method then operates to mix filtered signals with an electrical local oscillator signal. The electrical local oscillator signal is also a physical element. Thus, the claimed method does not merely manipulate an abstract idea nor does it perform a purely mathematical algorithm. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 12-14 and 16-17 under 35 U.S.C. § 101.

#### **Rejection Under 35 U.S.C. § 103**

Claims 1-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Okoshi et al. (US '359, hereinafter Okoshi) in view of van Deventer et al. (Optics Letters, hereinafter van Deventer).

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Without conceding the first and second criteria, Applicants assert that the rejection does not satisfy the third criteria.

The Office Action admits that Okoshi does not teach having filters. The Office Action attempts to cure this deficiency by introducing van Deventer, which the Office Action alleges to teach having such filters. However, this combination, as presented, does not teach or suggest all limitations of the claimed invention.

Claim 1, as amended with the subject matter of now-canceled claim 8, defines a system where the photodetectors are coupled in a serial arrangement and each of said bandpass filters is coupled to a respective node between two respective photodetectors of said plurality of photodetectors. The combination of Okoshi and van Deventer does not disclose at least this limitation. The Office Action states that Okoshi does not teach having filters. Van Deventer does not disclose having a plurality of bandpass filters, each of which is coupled to a respective node between two respective photodetectors. Thus, the combination of Okoshi and van Deventer does not teach all of the claimed limitations. Therefore, the Applicants respectfully assert that for the above reasons claim 1 is patentable over the 35 U.S.C. § 103(a) rejection of record.

Claim 12, as now amended, defines a method for determining a spectral content of an optical signal that includes photodetecting said phase-diverse components using at least three photodiodes thereby mixing said optical signal with said local oscillator. The combination of Okoshi and van Deventer does not disclose at least this limitation. Neither Okoshi nor van Deventer disclose having three photodiodes. Thus, the combination of Okoshi and van Deventer does not teach all of the claimed limitations. Therefore, the Applicants respectfully assert that for the above reasons claim 12 is patentable over the 35 U.S.C. § 103(a) rejection of record.

Claim 18, as now amended, defines a system for determining a spectral content of an optical signal that at least three photodetector means with each photodetector means illuminated by a respective one of said phase-diverse components thereby mixing said optical signal with said optical local oscillator signal. The combination of Okoshi and van Deventer does not disclose at least this limitation. Neither Okoshi nor van Deventer disclose having three photodetector means. Thus, the combination of Okoshi and van Deventer does not teach all of the claimed limitations. Therefore, the Applicants respectfully assert that for the above reasons claim 18 is patentable over the 35 U.S.C. § 103(a) rejection of record.

Claims 2-7, 9-11, 13-14, 16-17, and 19-20 depend from base claims 1, 12, and 18, respectively, and thus inherit all limitations of their respective base claim. Each of claims 2-7, 9-11, 13-14, 16-17, and 19-20 sets forth features and limitations not recited by the combination of Okoshi and van Deventer. Thus, the Applicants respectfully assert that for the above reasons claims 2-7, 9-11, 13-14, 16-17, and 19-20 are patentable over the 35 U.S.C. § 103(a) rejection of record.

### **Conclusion**

In view of the above amendments and arguments, Applicants believe the pending application is in condition for allowance.

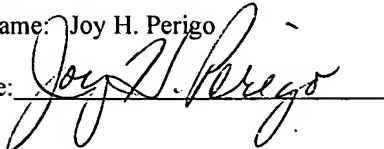
Applicants respectfully request that the Examiner call the below listed attorney if the Examiner believes that such a discussion would be helpful in resolving any remaining problem

Applicant believes no fee is due with this response. However, if a fee is due, please charge Deposit Account No. 50-1078, under Order No. 10021901-1 from which the undersigned is authorized to draw.

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Label No. EV568268068US in an envelope addressed to: MS Amendment, Commissioner for Patents, P O Box 1450, Alexandria, VA 22313-1450.

Date of Deposit: February 15, 2007

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